

Table of Contents *(scroll or use links below to navigate document)*[What They Do](#)[Tasks](#)[Skills, Knowledge, and Abilities](#)[Work Environment](#)[California's Job Outlook and Wages](#)[Trends](#)[Training](#)[Where Do I Find the Job?](#)[Where Can the Job Lead?](#)[Other Sources](#)[View Career Video](#)**What They Do**

Printing Machine Operators prepare, operate, and maintain various types of printing machines in a pressroom. Duties of Printing Machine Operators vary according to the type of press they operate. Offset lithography, the most common printing process, transfers an inked impression from a rubber-covered cylinder to paper or other material. With the gravure process, the recesses on an etched plate or cylinder are inked and pressed to paper. Flexography is a form of rotary printing in which ink is applied to a surface by a flexible rubber printing plate with a raised image area. The gravure and flexography printing processes should increase over the next decade. Plateless processes, digital, electrostatic, and ink-jet printing are used for copying, duplicating, and document and specialty printing by commercial printers for short-run jobs.

Printing Machine Operators prepare presses for printing by installing and adjusting the printing plate, adjusting pressure, inking the presses, loading paper and adjusting the press to the paper size. They ensure that paper and ink meet specifications. Operators adjust margins and the flow of ink to the inking rollers. Then, they feed paper through the press cylinders and adjust feed and tension controls. Printing Machine Operators duties differ from shop to shop depending upon the type and size of presses used. Small commercial shops tend to have smaller presses, which print only one or two colors at one time. Large newspaper, magazine, and book printers use giant "in-line web" presses that require a crew of several press operators and press assistants. Paper is fed into these presses in large rolls, called "webs," up to 50 inches or more in width.

Press Operators monitor the operation of printing presses while they are running. They keep the paper feeders well stocked. Operators also make adjustments to correct uneven ink distribution, and speed. If paper jams or tears and causes the press to stop, they fix the problem to reduce downtime and maintain productivity. Operators working with high-speed presses continuously watch for problems and make corrections to prevent expensive losses of paper and ink. In most shops, they perform preventive maintenance by oiling and cleaning the presses and making minor repairs.

Tasks

- ▶ Push buttons, turn handles or move controls and levers to start printing machine or manually controls equipment operation.
- ▶ Turn, push, or move controls to set and adjust speed, temperature, inkflow, and position and pressure tolerances of press.

Printing Machine Operators

- ▶ Select and install printing plates, rollers, screens, stencils, type, die, and cylinders in machine according to specifications, using hand tools.
- ▶ Load, position, and adjust unprinted materials on holding fixture or in loading and feeding mechanisms of press.
- ▶ Review work order to determine ink, stock, and equipment needed for production.
- ▶ Accept orders, calculate and quote prices, and receive payments from customers.
- ▶ Discard or correct misprinted materials, using ink eradicators or solvents.

Detailed descriptions of this occupation may be found in the Occupational Information Network (O*NET) at online.onetcenter.org.

Important Skills, Knowledge, and Abilities

- ▶ Operation and Control — Controlling operations of equipment or systems.
- ▶ Operation Monitoring — Watching gauges, dials, or other indicators to make sure a machine is working properly.
- ▶ Equipment Selection — Determining the kind of tools and equipment needed to do a job.
- ▶ Quality Control Analysis — Conducting tests and inspections of products, services, or processes to evaluate quality or performance.
- ▶ Production and Processing — Knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods.
- ▶ Mechanical — Knowledge of machines and tools, including their designs, uses, repair, and maintenance.
- ▶ Control Precision — The ability to quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions.
- ▶ Visual Color Discrimination — The ability to match or detect differences between colors, including shades of color and brightness.
- ▶ Oral Comprehension — The ability to listen to and understand information and ideas presented through spoken words and sentences.
- ▶ Near Vision — The ability to see details at close range (within a few feet of the observer).

Work Environment

Most Printing Machine Operators work in large pressrooms that are usually well-ventilated and climate controlled. Pressrooms contain a wide variety of machinery such as presses, folders, and cutters which create a noisy environment. Printing Machine Operators work on their feet for long periods of time and lift boxes and packages on a daily basis. They often work under the pressure to meet deadlines, which can be stressful. Printing Machine Operators work with high speed press machinery which may be hazardous. However, health risks are minimized when operators follow safe work practices and wear safety gear such as ear protectors. Most Printing Machine Operators work a 35 to 40-hour work week. However, many printing companies operate two or three shifts. Operators may be required to work any shift. Those who work for newspapers may work weekends, nights, and holidays. They may also work overtime to meet deadlines.

Many printing plants are nonunion. However, some Printing Machine Operators at large companies belong to the Graphic Communications International Union.

Printing Machine Operators

California's Job Outlook and Wages

The California Outlook and Wage table below represents the occupation across all industries.

Standard Occupational Classification	Estimated Number of Workers 2004	Estimated Number of Workers 2014	Average Annual Openings	2006 Wage Range (per hour)
Printing Machine Operators				
51-5023	20,300	21,700	610	\$11.31 to \$21.33

Wages do not reflect self-employment.

Average annual openings include new jobs plus net replacements.

Source: www.labormarketinfo.edd.ca.gov, Employment Projections by Occupation and OES Employment & Wages by Occupation, Labor Market Information Division, Employment Development Department.

Trends

Employment of Printing Machine Operators is expected to grow more slowly than average for all occupations over the 2004–2014 period. However, opportunities will continue to arise from the need to replace the Printing Machine Operators who retire or leave the labor force for other reasons. Also, there will be a continuing need for computer literate operators to work on increasingly computerized printing equipment.

Training/Requirements/Apprenticeships

Printing Machine Operators usually follow one of the following training paths:

- ▶ High school diploma or equivalent
- ▶ Vocational school
- ▶ Adult education Program
- ▶ Community college programs or certificates
- ▶ Formal, four-year apprenticeship
- ▶ Extensive on-the-job training

Most Printing Machine Operators are trained informally on the job while working as helpers for experienced operators. However, training is also available through formal apprenticeship programs. Apprenticeships for Press Operators in commercial shops last four years. Apprenticeships include on-the-job instruction and related classroom instruction.

Some community colleges and adult education programs offer printing machine technology certificates or degrees.

Recommended High School Course Work

Due to continuous technical developments, high school preparation courses in chemistry, electronics, color theory, graphic arts, physics, and computer technology are helpful.

Printing Machine Operators

Where Do I Find the Job?

Direct application to employers remains one of the most effective job search methods.

Use the *Search Employers by Industry* feature on the *Career Center* page at www.labormarketinfo.edd.ca.gov to locate employers in your area. Search using keywords from the following manufacturing industry names to get a list of private firms and their addresses:

- ▶ All Other Publishers
- ▶ Book Publishers
- ▶ Commercial Lithographic Printing
- ▶ Commercial Screen Printing
- ▶ Corrugated/Solid Fiber Box
- ▶ Directory and Mailing List Publishers
- ▶ Manifold Business Forms Printing
- ▶ Newspaper Publishers
- ▶ Other Commercial Printing
- ▶ Periodical Publishers
- ▶ Prepress Services
- ▶ Tradebinding and Related Work

Search these **yellow page** headings for listings of private firms:

- ▶ Lithographers
- ▶ Prepress Services
- ▶ Printers Photo Offset
- ▶ Printing Brokers
- ▶ Printing Consultants

Where Can the Job Lead?

Advancement opportunities for Printing Machine Operators usually involves an increase in pay and responsibility by working on a more complex printing press. For example, a one-color sheet-fed press operator may become a four-color sheet-fed press operator. Some operators may advance to pressroom supervisor assuming the responsibility for an entire crew, while others may advance to become a company salesperson or a plant manager.

Other Sources of Information

International Association of Machinists and Aerospace Workers
www.iamaw.org

Graphic Comm Central
www.teched.vt.edu/gcc

Graphic Arts Information Network
www.gain.net

Graphic Communications Conference of the International Brotherhood of Teamsters (GCC/IBT)
www.gciu.org